

**Notice of Allowability**

Application No.

10/727,420

Examiner

Merilyn P. Nguyen

Applicant(s)

DAY ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the interview dated August 29, 2006 and the amendment filed August 22, 2006.
2. ☒ The allowed claim(s) is/are 1, 4-6, 8-20 and now renumbered as 1-17.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
DON WONG  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100

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***DETAILED ACTION***

1. In response to the communication dated August 22, 2006 and August 29, 2006, claims 1, 4-6 and 8-20 are active in this application as the result of the cancellation of claims 2, 3 and 7 and in the condition for allowance.

***Examiner's Amendment***

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Owen J. Gamon, Reg. No. 36,143 on 08/29/06.

The application has been amended as follows:

**Amendment to Abstract:**

A method, apparatus, and system[[, and signal-bearing medium]] that in an embodiment detect that a trigger exists, where the trigger indicates a potential need to rebuild a saved query access plan, and determine whether a previous job associated with the trigger created a new access plan that was identical to the saved access plan. If a previous job associated with the trigger has already created the new access plan and found that it was identical to the saved access plan, then the query is performed with the saved access plan, since there is no advantage to be gained by creating the new access plan again. In this way, multiple jobs are kept from repeatedly re-creating an access plan that is identical to one that already exists.

**Amendment to Specification:**

*Page 3, lines 5-14, Summary section:*

**SUMMARY**

A method, apparatus, and system[[, signal-bearing medium]] are provided that in an embodiment detect that a trigger exists, where the trigger indicates a potential need to rebuild a saved access plan, and determine whether a previous job associated with the trigger created a new access plan that was identical to the saved access plan. If a previous job associated with the trigger has already created the new access plan and found that it was identical to the saved access plan, then the query is performed with the saved access plan, since there is no advantage to be gained by creating a new access plan again. In this way, multiple jobs are kept from repeatedly re-creating an access plan that is identical to one that already exists.

*Page 9, lines 3-20:*

Moreover, while embodiments of the invention have and hereinafter will be described in the context of fully functioning electronic devices, the various embodiments of the invention are capable of being distributed as a program product in a variety of forms, and the invention applies equally regardless of the particular type of [[signal-bearing]] computer-readable storage medium used to actually carry out the distribution. The programs defining the functions of this embodiment may be delivered to the electronic device 102 via a variety of [[signal-bearing]] computer-readable storage media, which include, but are not limited to:

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(1) information permanently stored on a non-rewriteable storage medium, e.g., a read-only memory device attached to or within an electronic device, such as a CD-ROM readable by a CD-ROM drive;

(2) alterable information stored on a rewriteable storage medium, e.g., a hard disk drive or diskette; or

(3) information conveyed to an electronic device by a communications medium, such as through a computer or a telephone network, e.g., the network 105, including wireless communications.

Such [[signal-bearing]] computer-readable storage media, when carrying machine-readable instructions that direct the functions of the present invention, represent embodiments of the present invention.

***Amendment to Claims:***

1. (Currently amended) A computer-implemented method comprising:

detecting that a trigger exists, wherein the trigger indicates a need to rebuild a saved access plan associated with query;

determining whether a previous job associated with the trigger created an access plan that was identical to the saved access plan;

if the previous job associated with the trigger did not create the access plan that was identical to the saved access plan, creating a new access plan and comparing the saved access plan with the new access plan; and

if the comparing determines that the saved access is identical to the new access plan, performing the query via the saved access plan.

6. (Currently amended) An apparatus comprising:

means for detecting that a trigger exists, wherein the trigger indicates a need to rebuild a saved access plan associated with query;

means for determining whether an access plan was previously created in response to the trigger and the access plan was previously found to be identical to the saved access plan;

means for performing the query with the saved access plan if the determining is true; and

means for creating [[the]] a new access plan and comparing the saved access plan with the new access plan if the determining is false.

11. (Currently Amended) A computer-readable storage device encoded with instructions, wherein the instruction when executed comprise:

detecting that a trigger exists, wherein the trigger indicates a need to rebuild a saved access plan associated with query;

determining whether a previous job associated with the trigger created an access plan that was identical to the saved access plan;

performing the query with the saved access plan if the determining is true; and

creating [[the]] a new access plan and comparing the saved access plan with the new access plan if the determining is false.

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16. (Currently Amended) An electronic device comprising:

a processor; and

a computer-readable storage device encoded with instructions, wherein the instructions when executed on the processor comprise:

detecting that a trigger exists, wherein the trigger indicates a need to rebuild a saved access plan associated with query,

determining whether a previous job associated with the trigger created an access plan that was identical to the saved access plan,

performing the query with the saved access plan if the determining is true,

creating [[the]] a new access plan and comparing the saved access plan with the new access plan if the determining is false, and

performing the query via the saved access plan if the comparing determines that the saved access plan is identical to the new access plan.

**Allowable subject matter**

3. The following is an examiner's statement of reason for allowance:

None of the references of record Ellis (US Patent No. 6,366,901), Chaudhuri (US Patent No. 6,529, 901), Bestgen (US Patent No. 6,915,290) and Brown (US 2003/0093408) teaches or suggests the claimed (Claim 1) invention having, in addition to the other limitations in the claims, the limitation of if the previous job associated with the trigger did not create the access plan that was identical to the saved access plan, creating a new access plan and comparing the

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saved access plan with the new access plan and if the comparing determines that the saved access is identical to the new access plan, performing the query via the saved access plan.

None of the references of record Ellis (US Patent No. 6,366,901), Chaudhuri (US Patent No. 6,529, 901), Bestgen (US Patent No. 6,915,290) and Brown (US 2003/0093408) teaches or suggests the claimed (Claim 6) invention having, in addition to the other limitations in the claims, the limitation of performing the query with the saved access plan if the determining is true and creating a new access plan and comparing the saved access plan with the new access plan if the determining is false.

None of the references of record Ellis (US Patent No. 6,366,901), Chaudhuri (US Patent No. 6,529, 901), Bestgen (US Patent No. 6,915,290) and Brown (US 2003/0093408) teaches or suggests the claimed (Claim 11) invention having, in addition to the other limitations in the claims, the limitation of performing the query with the saved access plan if the determining is true and creating a new access plan and comparing the saved access plan with the new access plan if the determining is false.

None of the references of record Ellis (US Patent No. 6,366,901), Chaudhuri (US Patent No. 6,529, 901), Bestgen (US Patent No. 6,915,290) and Brown (US 2003/0093408) teaches or suggests the claimed (Claim 16) invention having, in addition to the other limitations in the claims, the limitation of performing the query with the saved access plan if the determining is true, creating a new access plan and comparing the saved access plan with the new access plan if

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the determining is false, and performing the query via the saved access plan if the comparing determines that the saved access plan is identical to the new access plan.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

#### ***Conclusion***

5. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the day of this letter. Failure to respond within the period for response will cause the application to become abandoned (see M.P.E.P 710.02(b)).

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bestgen U.S Patent No. 6,915,290 discloses database query optimization apparatus and method that represents queries as graphs.

Chaudhuri U.S Patent No. 6,529,901 discloses automating statistics management for query optimizers.

Chang U.S Patent No. 6,917,932 discloses Dynamic optimization of multi-feature queries.



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Lohman U.S 2005/0097078 discloses system, method, and computer program product for progressive query processing.

Agarwal U.S Patent No. 6,738,782 discloses method and mechanism for extending native optimization in a database system.

Lin U.S Patent No. 6,615,203 discloses method, computer program product, and system for pushdown analysis during query plan generation.

Boger U.S Patent No. 6,996,556 discloses metadata manager for database query optimizer.

Jaideep Srivastava and Gary Elsesser disclose, "Optimizing Multi-Join Queries in Parallel Relational Databases", 1993.

Matthias Jarke and Jurgen Koch disclose, "Query Optimization in Database Systems", 1984.

R. Braumandl, M.Keidl, A. Kemper, D. Kossmann, A.Kreutz, S. Seltzsam and K.Stocker disclose, "ObjectGlobe: Ubiquitous query processing on the Internet", 2001.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marilyn P Nguyen whose telephone number is 571-272-4026. The examiner can normally be reached on M-F: 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and 703-746-7240 for After Final communications.

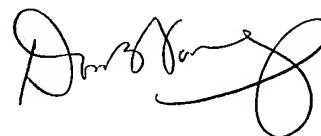
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

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August 29, 2006

A handwritten signature in black ink, appearing to read "Don Wong", with a stylized, looping flourish at the end.

**DON WONG**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2100**